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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,219	05/19/2005	Akihiko Ohta	2005_0407A	3226

513 7590 03/07/2008

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EXAMINER	
KERNS, KEVIN P	

ART UNIT	PAPER NUMBER
1793	

MAIL DATE	DELIVERY MODE
03/07/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/527,219	OHTA ET AL.	
	Examiner	Art Unit	
	Kevin P. Kerns	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 March 2005 and 16 March 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3010211 in view of JP 54-130451 (complete translation provided with the previous Office Action).

JP 3010211 discloses an arc welding method using a shielding gas of rare gas (argon) mixed with oxygen (e.g. 98% argon and 2% oxygen) for repair welding of a welding material for a horizontal annex 2 to a vertical member (see Figure 1) having a low transformation temperature (martensite transformation expansion at room

temperature where the welding is complete or in its vicinity – page 2, 4th full paragraph of translation), such that the repair welding is controlled to avoid cracking (avoiding alternation of heating and cooling) via control of welding temperature and other welding parameters (abstract; pages 2-4 of translation; and Figures 1-5). JP 3010211 does not specifically disclose the avoidance of alternation of heating and cooling during the step of "additional" welding (i.e. cladding or depositing an additional weld layer on a "pre-existing" weld bead).

However, JP 54-130451 discloses a method of reducing residual stress at a welded joint of a steel workpiece, in which the method includes the step of welding a final (additional) layer of cladded/deposited metal using an austenitic metal at an upper side to a lower side of a side face of the workpiece (Figures 2-4) to form a substantially linear weld line (Figure 4), followed by cooling to a temperature (room temperature or lower – see paragraph under "2. Claim" on page 1 of the translation) to cause martensitic transformation, such that the step of additional welding is advantageous for avoiding shrinkage of the deposited metal by the expansion due to transformation from austenite into martensite, thus reducing embrittlement and residual stress at the weld zone (abstract; pages 1-4 of translation; and Figures 1-4).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the arc welding method disclosed by JP 3010211, by using the method of reducing stress by welding an additional layer while avoiding alternation of heating and cooling, as taught by JP 54-130451, in order to avoid shrinkage of the deposited metal by the expansion due to transformation from austenite

into martensite, thus reducing embrittlement and residual stress at the weld zone (JP 54-130451; abstract; page 1, 4th and 5th lines from the end of the page of the translation; and page 2, last paragraph of the translation).

Response to Arguments

4. The examiner acknowledges the applicants' response received by the USPTO on January 22, 2008. Claim 5 remains under consideration in the application.

5. Applicants' arguments filed January 22, 2008 have been fully considered but they are not persuasive.

With regard to the applicants' remarks/arguments on pages 3-5 of the response, the applicants' major argument is that the JP '211 reference allegedly fails to disclose the limitation "a horizontal annex is connected to a vertical member". In response to this argument (while also incorporating the examiner's Response to Arguments in section 5 of the Office Action mailed October 19, 2007 to supplement the following discussion), the examiner respectfully disagrees that this limitation is allegedly not disclosed and/or suggested by JP '211 (alone or in combination with JP '451).

First, it is noted that the applicants have not disputed the examiner's Response to Arguments (section 5) of the October 19, 2007 Office Action, but instead address the above "horizontal" versus "vertical" limitation in their current response.

Second, the applicants state (at the bottom of page 3 of the remarks section – in addressing Figure 1 of JP '211) that "there is no question that the main steel plate is

disposed in a horizontal plane". The examiner respectfully disagrees, as Figure 1 would either be horizontal or vertically arranged, and a horizontal annex 2 would provide an additional horizontal (width) dimension to a vertical member if the arrangement of Figure 1 would be rotated by 90 degrees. In other words, a 90 degree rotation of Figure 1 would at least be suggested by the disclosure of JP '211, while it is also noted that the applicants' statement "no question that the main steel plate is disposed in a horizontal plane" (assertion on page 3 of the remarks) is not specifically disclosed in JP '211 as well. Even if the applicants' argument would be fully persuasive (i.e. there is no "vertical" member by any broadly defined interpretations), one of ordinary skill in the art would have readily recognized that rotating the "horizontal" member 90 degrees to make it a "vertical" member, and subsequently followed by welding a horizontal annex, would have been "obvious to try", since the applicants are choosing from a finite number of identified predictable solutions with a reasonable expectation of success, in order to obtain a strong weld of a horizontal annex to a member, which would occur regardless of the orientation of the member (horizontal, vertical, or at an angle). *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ.2d 1385 (S.Ct. 2007). In other words, the actual "additional welding method" (as obvious over JP '211 in view of JP '451) would be the same regardless of orientation of the member and annex welded thereto.

Third, a "vertical member" is broadly interpreted as only requiring a dimension of "height", regardless of whether or not the horizontal "width" is larger than the vertical "height". Furthermore, a member with a vertical dimension much greater that its horizontal dimension is still able to be considered a vertical member, even when

arranged in a horizontal position. During patent examination, the pending claims must be "given the broadest reasonable interpretation.". Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). In the instant case, the broadest reasonable interpretation of the term "vertical" would include members that have a horizontal dimension greater than a vertical dimension. In applying the *Prater* test by giving the claim its broadest reasonable interpretation, it is the examiner's position that the limitations of independent claim 5 do not distinguish over the prior art references. As a result, claim 5 remains rejected.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571)272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns
Primary Examiner
Art Unit 1793

/Kevin P. Kerns/
Primary Examiner, Art Unit 1793
February 29, 2008